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ABSTRACT

The author reviews some recent theories, experiments, and observations in psychology and psycholinguistics which challenge the basic assumptions of the audio-lingual method of foreign language teaching: Language learning is habit formation, requiring analogy rather than analysis; meaning can be learned only in the matrix of allusions to the culture in which the language is used; language should be heard and spoken before being read and written. The "errorless habit formation" of the audio-lingual approach is being replaced with the new theory of hypotheses construction. The importance of analysis is being realized, as is the necessity of personal and situational meaning in language materials. Every language has its set of sociolinguistic as well as linguistic rules, which are, by themselves, a distinct means of communication. The study of bilingualism aids the analysis of the systematic nature of the functioning of sociolinguistic rules (which include alternation, sequencing, and co-occurrence rules). Teachers must instruct students in bilingual behavior and must establish a set of priorities and instruct according to these values. Sample intonation and word drills and grammar hypotheses, based on the vocabulary and structure in Lesson I of M.E. Gowland's "Espanol Primer Curso," are appended. (AMM)

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CLASSROOM APPLICATION OF RECENT LINGUISTIC THEORY AND RESEARCH

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During World War II, the science of linguistics created and formed a new presentation of several Indo-European and "exotic" languages for the U. S. Department of Defense. The purpose was to rapidly teach large numbers of military personnel to communicate with their allies and with nationals of occupied territories. In the post-war era, this linguistic approach to foreign language instruction combined with the learning theory of neo-behaviorism to produce the audio-lingual method. The audio-lingual method was credited by all, except the most stubborn traditionalists, as being the ultimate way to implant bilingual behavior in mono-lingual speakers. It was proposed for classrooms on the university, secondary and primary levels. Recently, the audio-lingual method has received criticism, not from the traditionalists, but from the recent theories of linguists, psychologists and sociologists.

In reviewing B. F. Skinner's neo-behaviorist book, Verbal Behavior, Noam Chomsky writes, "The fact that all normal children acquire essentially comparable grammars of great complexity with a remarkable rapidity suggests that human beings are somehow specially designed to do this..."[1] The basis of the current debate between audio-lingual methodologists and those linguists, psychologists and sociologists who follow Chomsky's school of thought is the extent of man's innate capacity to acquire a language. Skinner posits only one primary ability, that of

analogizing. He admits to one secondary capability, the echoic operant. On the other hand, Chomsky posits within the child an innate ability to hear language and internally construct a grammar that accounts for the order, system and possible alternations of the phonological, semantic and syntactic components of that language.

I

The school of neo-behaviorist psychology attempts to describe all human behavior, especially learning, since in Skinner's analysis, all behavior is learned. The basis of its findings is the objective and accessible evidence of a stimulus (a measurable amount of energy that can excite certain sensory perceptors) and a response. A response that is elicited by a stimulus in the environment is a respondent. These are the elements of classical conditioning. Skinner added the theory of operant conditioning. The operant is a response for which there is no external, observable stimulus. It is emitted and acts upon the environment. If it receives reinforcement, the rate of response will increase. If it does not, the operant will be extinguished.

Skinner applied operant conditioning to the acquisition of the mother tongue. The audio-lingual method applied his findings to second language teaching. In neo-behaviorist terminology, a child is receptive to the linguistic patterns devised by his community through the stimulus of his need for food, protection, and love and through the stimulus of his parents' desire for him to talk. The parents, acting as linguistic models, activate the child's echoic operant. He babbles and tries to mimic sounds.

If his babbling approximates a word, his parents show pleasure. Their pleasure rewards his first success in this trial and error process. The operant is reinforced.

Skinner theorizes that parents consciously establish a correct pattern for the child to follow out of their need to control the child. He repeats only these patterns until they are mastered. The achievement of the linguistic goal, not the process, is important. Errors made during learning are detrimental. Skinner's verbal theory fails to recognize that trial and error is the basis of operant conditioning. It begins when the child's echoic operant functions and eventually produces a combination of sounds which have meaning for his parents. Wilga Rivers writes that many psychologists assert that trial and error is a narrow selection of available choices based on previous learning and applied to a new situation. It is not random behavior.[2]

Skinner's theory does not account for the varying degrees of "baby talk" that the child produces for about thirty months (from age one and one half years to four years) and that the parents accept. Also, this view ignores evidence that the parental linguistic models will, like everyone, make false starts, hesitations and often use incomplete sentences in conversations. These do not interfere with a child's acquisition of correct patterns. To continue with Skinner's theory, once the child has acquired a pattern, he uses his innate power of analogy to replace lexical items and build other sentences. Analogy is based on similarity. Skinner does not explain the criterion for similarity. Is it

sound, function, meaning or form? The audio-lingual method stresses the use of analogy and form for second language teaching. Form, however, is meaningless without function. Function can only be determined through analysis.

Here are the beginnings of the union between neo-behaviorist theories of first language acquisition and the practices of audio-lingual methodology. In its final form, this method has accepted four basic, psychological assumptions. The first is that foreign language learning is basically a mechanical process of habit formation according to Skinner's operant conditioning. This habit is formed when the student emits correct responses, not errors, and when that response is reinforced. The second assumption is that analogy, rather than analysis, provides a firmer foundation for language learning. The third is that semantics can be learned only through the matrix of allusions to the culture of the language which uses it. Last, linguistic habits are learned more effectively if the material is presented in the spoken form, not the written.

II

Recent linguistic theory has challenged these basic assumptions of the audio-lingual method. The core of this challenge is Chomsky's refutation of Skinner's theory that language is imposed on man through external stimulus. According to Skinner, man only contributes the ability to analogize and the echoic operant.

> However, there is surely no reason today for taking seriously a position that attributes a complex human achievement entirely to months (or at most years)

> of experience, rather than to millions of years of evolution... such a position is particularly implausable with regard to language, an aspect of the child's world that is a human creation and would naturally be expected to reflect intrinsic human capacity in its internal organization.[3]

This refutation has reactivated a controversy that spans the history of human thought. It is clearly seen in the sixteenth, seventeenth and eighteenth century debates between the Empiricists and the Rationalists. The linguists who support Skinner and the audio-lingual method stand squarely in the tradition of Empiricism. Its centerpiece "...was the thesis that all human knowledge is derived externally from sense impressions /stimulus and response/ and the operations of the mind upon them in abstraction and generalization /analogy/. Its extreme form appears in Hume's total rejection of an a priori component of knowledge."[4] Chomsky and those social scientists who follow his school are heirs to the Rationalists' belief that the certainty of knowledge is found irrefutably in the truths of human reason. They gain additional support from the nineteenth century writings of Wilhelm von Humbolt, "Originally, everything in the human being is inside him -- sensation, feeling, desire, thought, decision, language and deeds. But as the inside comes into contact with the outside world /as the child's mind perceives language used by his parents/, it begins to operate independently and determine by its own unique configuration the inner and outer functions of others."[5]

Chomsky theorizes that every human being is born with an innate ability to order language. A child analyzes the linguistic input (including false starts, hesitations and other imperfections) given by his parents. Through a series of hypothesis construction and reconstruction that gradually eliminates errors, he accounts for this data with the creation of his own grammar. Chomsky divides language into two functions, competence and performance. Competence is the internal grammar that enables individuals to communicate and comprehend. One of its first tasks is to allow the child to filter out imperfections in the linguistic data. Competence is the creative ability to produce an entirely new sentence and to understand a sentence that has never before been heard. At the Twenty-first Annual Round Table sponsored in March, 1970 by Georgetown University, Einar Haugan added another dimension. He spoke of a "variable competence" as opposed to a static one. An individual is always enriching his linguistic repertoire. This is especially true, he said, of a bilingual.

The criterion for judging competence is grammaticality. The criterion for judging performance is acceptability. This function of language is linked to semantic and social values. Performance is the realization of man's competence through communication and comprehension. It can be inhibited by many extralingual factors, such as nervousness, memory limitation and lack of knowledge about the topic of discussion. A grammatical sentence may be unacceptable if it has an excess of embedded and branching clauses that make comprehension difficult. A grammatical sentence

may be unacceptable if it is semantically or socially inappropriate. Therefore, performance never equals competence.

Chomsky bisects language into two structures. The first is the deep structure, which is similar to the état abstrait of the Rationalists. As introduced in Aspects of the Theory of Syntax, this is the underlying meaning of a sentence. It is specified by the syntactic component and interpreted by the semantic component. The second structure is the surface one, which is similar to the état concret of the Rationalists. It is also specified by the syntactic component but its interpretation is through the phonological component. Syntax contains a transformational subcomponent. that generates the surface structure from the deep one. These structures and components are linguistic universals and belong to man's competence. Chomsky theorizes that the deep structures of all languages are at least similar, possibly identical. The transformational model of analysis has revealed that grammatical catagories of one language can be equated with grammatical catagories of another language that, superficially, appear totally different. Therefore, the learner of a second language should be able to see through the surface to the underlying reality and find it compatible with the deep structure of his mother tongue.

In summary, the theory of linguistics advanced by Noam Chomsky challenges the first three basic assumptions of the audio-lingual method. This theory views language acquisition as a process of hypotheses formation and the gradual elimination of

errors. It is not a habit formed only through correct responses and immediate reinforcements. Second, the child analyzes his language and tests each hypothesis. He does not rely totally on analogy. Last, semantics is the interpretive component of the deep structure. The deep structures of languages can be related. This seems to weaken the audio-lingual assertion that meaning can only be learned in the matrix of the culture of the given language.

III

Recent theories, experiments and observations in the sister disciplines of psychology and psycholinguistics challenge all four assumptions of the audio-lingual method. To recapitulate, these four concern habit formation, analogy, meaning and the use of written forms. Several general observations have triggered research on opposing theories. The first is that children do not produce adult sentences during the early years of the acquisition process. Contrary to Skinner's "conscious linguistic model" view of parents, parents do accept nongrammatical sentences. Studies have shown that at any given age, the child's "baby talk" is a self-contained, internally consistent system that is independent of adult grammar. V. J. Cook reminds linguists that, "It seems absurd to describe, in effect, the child as possessing all the rules of adult competence together with a set of deletion and reduction rules to account for his ungrammatical sentences."[6] The progress toward adult speech is not noticeably affected by an individual's intelligence.

The second general observation is that first language acquisition cannot be equated with second language learning.

The physiological, emotional and mental capabilities of the second language learner are more fully developed. Sheldon Rosenberg posits six components of what he refers to as man's Innate Language Acquisition System. Each of these six interact and interrelate. Every part of the ILAS device has slightly different facets for the average second language learner, who is usually between twelve and twenty-two years of age. These six are the general cognitive component, the specific cognitive component for linguistics, the receptor-effector component, the motivational component, the environmental component and the critical development component. The general cognitive abilities are developed before most students enter a foreign language classroom. They can aid his progress. On the other hand, the development of the specific cognitive component for his mother tongue will often interfere with the new linguistic data. The physiology (receptor-effector) of the second language learner is less flexible and less able to audially distinguish and verbally reproduce new sounds. The motivation and environment of a language classroom are far more limited than those of the child's home. Lastly, there is a specific time span during early childhood that triggers the best interaction and function of the other components of the ILAS device. Observations reveal that if a child passes through this critical development component (for example, because of a physical handicap that is later corrected) without activating it, acquisition of the mother tongue becomes a slower and more difficult process.

One particular set of experiments reported by E. S. Klima and U. Bellugi in Psycholinguistics Papers, supports the psycholinguistic theory about internal construction and reconstruction of hypotheses. Klima and Bellugi analyzed the language capacity of three children during their first months of language acquisition. These children had no contact with each other. Independently, each one produced sentences that were systematic and regular within themselves and corresponded to the systematicness and regularity of the sentences produced by the other children. These sentences were not merely incorrect repetitions of adult speech or random errors. The mistakes showed what the child's internal hypothesis was unable to account for in the adult's linguistic input. The children gradually reshaped their hypotheses and eliminated errors to more closely fit the language data.

Klima and Bellugi group the process of forming negations into three stages. During the first stage, the children produced sentences that consisted of a simple nucleus either preceded of followed by "no" or "not."

$$S \longrightarrow \left\{ \begin{matrix} \left\{ \begin{matrix} no \\ not \end{matrix} \right\} N \\ N \left\{ \begin{matrix} no \\ not \end{matrix} \right\} \end{matrix} \right\}$$

Some examples are: "No wipe finger ";and, "Not a teddy bear." Auxiliaries were used with negations in stage two. The children combined a nominal with one of four negative forms plus either a predicate or a main verb to get six ways of forming the construction.

$$S \longrightarrow \text{Nom } (\text{Aux}^{neg}) \left\{ \begin{matrix} Pred \\ \text{Main Vb} \end{matrix} \right\}$$

$$\text{Aux}^{neg} \longrightarrow \text{Neg, V}^{neg}$$

$$\text{Neg} \longrightarrow \text{no, not}$$

$$V^{neg} \longrightarrow \text{can't, don't}$$

Examples are: "That no Mommy "; "He not little, he big "; "I can't catch you "; and, "I don't want it."

In the final stage, the children's hypothesis could govern the use of modal auxiliaries (would, should), indeterminants (some, someone) and a few optional transformational deletions.

$$S \longrightarrow \text{Nom} + \text{Aux} \begin{Bmatrix} \text{Pred} \\ \text{Main Vb} \end{Bmatrix}$$

$$\text{Aux} \longrightarrow T + V^{aux} \text{ (Neg)}$$

$$V^{aux} \rightarrow \text{do, can, be, will}$$

$$\overset{Top}{\text{NP} + \text{be}} \Longrightarrow \text{NP}$$

$$\overset{Top}{\text{do} + \text{Vb}} \Longrightarrow \text{Vb}$$

Examples taken from all three children include: "Don't kick my box "; "No, it isn't "; "'Cause he won't talk"; and, "I not crying." Klima and Bellugi also observed the same children pass independently through three stages of more complex hypotheses in the construction of interrogatives. In the first stage, they abstracted the intonation patterns from the primary linguistic data and mastered the interrogative intonation before mastering the process of inversion or the use of question words.

The work of Klima and Bellugi contradicts the audio-lingual theory that error in any language acquisition process is an ingrained habit that should have been avoided, but having occurred, must be immediately extinguished. The child's mistakes reveal those aspects of his parent's speech that his internal

grammar can not handle. As he recognizes these mistakes, he reshapes his hypothesis to more closely resemble adult competence. This observation questions the place of error in second language learning. The audio-lingual method has structured lesson materials for simplicity of learning so that error is impossible. Returning to Chomsky's theory, an error in performance may be due to nervousness or other extra-lingual factors. These are not the result of a lack of competence. Native speakers make this type of error.

Rivers reminds teachers that the student's biggest problem is not storage of foreign language data. His major difficulty is with retrieval, especially retrieval in unstructured situations. Mistakes will occur in classroom work with unstructured situations. Rivers adds that, in the terminology of operant conditioning, the reward is more important than the original response. If the correct answer is reinforced, it becomes an operant. If an incorrect answer is not rewarded, it is extinguished. This is not to say that language teachers should encourage errors or even be negligent to correct them. Rather, teachers should consider that error is a natural part of the process of learning to communicate, not an aberration that is dangerous to that process.

The second assumption of the audio-lingual method, that analogy is better than analysis for language learning, is related to the former assumption about habit formation. Nelson Brooks writes, "Since as children we learn the mother tongue quite by analogy and not at all by analysis, why should we not try to make analogy work in the learning of a second language."7

Klima and Bellugi demonstrate in the previously discussed experiments that children acquire the mother tongue through a series of hypothesis building. Contrary to Brooks, the construction and alteration of each hypothesis requires analysis. The psychologist, David McNeill, contends that the child learns abstraction very quickly. He innately analyzes the relationships of the deep structure. He understands that a noun phrase dominated by a sentence is the subject of that sentence. A noun phrase dominated by a verb is the object of that verb.

Rivers applies this to second language learning. Students can be trained to see the deep structure of a new language. She says that analogy, a form of generalization, can lead to false analogy. Analysis sets generalizations apart and avoids false analogies. The student must be trained in the ability to analyze and discriminate. For example, in the first lessons, he should be taught sound discrimination with systematically constructed drills before he is taught sound articulation. In later lessons, he should use analysis, with careful teacher guidance, to construct grammatical statements concerning the type of analogy that operates in the classroom drills. In the discussion of the ILAS device, Rosenberg says that the development of the general cognitive component can assist second language learning.

If the usefulness of both analogy and analysis is acknowledged, this paper must return to a previous question concerning the basis of analogy. While children do seem attracted to words on the basis of sound, Cook points out that they separate and

articulate the content words of a sentence long before inserting the grammatical forms. The general cognitive component includes a conceptual memory receptive to semantic stimulus. Susan M. Ervin-Tripp writes that especially for adults, language is meaning. They rapidly penetrate the surface to seek out the meaning of the deep structure. Rivers presents a composite overview of several psychologists' theories. She says that experiments by Razran and others show that considerably more generalization occurs on the basis of similarity of meaning than on sound, form or function.[8]

This questions the third assumption of the audio-lingual method, that meaning can only be learned in the matrix of allusions to the culture that uses that language. O. Hobart Mowrer describes semantics as an internal, subjective field that is in an on-going, ever-changing, innovational state. This internal field gives meaning to stimuli, signs and situations. Semantics is not external. In the terminology of neo-behaviorism, C. Osgood explains that experience conditions a person to the semantic and emotional meanings of words. These meanings act as the stimulus that directs an individual to produce the words.[9] The second language learner penetrates the surface to the meaning of new deep structures and absorbs them into his semantic field of the "variable competence." Therefore, the overlearning of forms in classroom and laboratory drills with the notion that meaning will be filled in as the student gains experience with the new culture is false. Language materials should have meaningful communication. The student should practice his foreign language in natural, face-to-face situations where he feels free to express himself.

The question of meaning relates to theory of overlearning and response cues. E. Tolman writes that continued practice of a learned response fixates that response and makes variation on future occasions less possible. If the student innovates, he is expressing his own thoughts in inner or articulated speech. This expression provides more reinforced practice in those aspects of language behavior of most use to him than can be provided in the limited time allowed for classroom, laboratory and home assignments. The audio-lingual method correlates repetition of a response with grammatical cues and teacher approval. This stimulus and reinforcement does not transfer to extra-classroom situations where repetition must be associated with contextual cues and the pleasure of communication.

The Institute of Modern Languages is experimenting with and developing language materials based on communication and contextual and situational relevance. The approach, called Situational Reinforcement (SR), is use-oriented rather than structure-oriented. Drills are internally structured but are built around real life situations and not the linguistic criterion of functional yield. These situations are acted out or illustrated in the classroom. "Each sequence is built up from a series of separate response drills, each of which consists of a question and answer, or a command, question and answer. Each of them is a genuine communication, a real use of language that is related to a contextual frame."[10] The purpose of this paper is not to examine or advocate the techniques of SR but to examine the theory.

The theory of SR is that if a student responds with communication to a natural, situational cue, rather than to a linguistic cue, similar situations outside the classroom will stimulate reinforced communication in the foreign language.

The last assumption of the audio-lingual method is that the student should hear and speak the language before he reads and writes it. Sometimes a time lag of several months is suggested. Recent work in psycholinguistics concludes that the written word should closely follow the spoken presentation. The ILAS device of the second language learner has matured beyond the stage of primary language acquisition. The receptor-effector component is less flexible and needs assistance in audial and verbal discrimination of new sounds. The mature general cognitive component can give this assistance. General cognitive abilities have several types of sensory stimulated memory that are interrelated and serve to support each other. These include the audial memory, the verbal memory, the previously mentioned conceptual memory and the visual memory. Students are receptive, often dependent, upon a visual stimulus. If presented in the form of a phonetic transcription of the significant allophones, this stimulus can aid the audial and articulatory organs and reduce interference from the mother tongue.

IV

To summarize, psychology and psycholinguistics challenge the four basic assumptions of the audio-lingual method. They have replaced the theory of errorless habit formation with the new theory of hypotheses construction. They have added the importance of analysis to that of analogy. The necessity of personal and

situational meaning in language materials is proposed. The usefulness of the written word is reasserted. The theories, experiments and observations of psychology and psycholinguistics overlap the work of sociolinguistics. In particular, the question of semantics and situations is a reminder that language is a social phenomenon. The student who learns a foreign language must learn to use it within the context of a foreign culture if his performance is to be acceptable. The cultural and social situation restricts the realization of linguistic competence.

Every language has its set of sociolinguistic as well as linguistic rules. Ervin-Tripp shows that the rules are, by themselves, a distinct means of communication. They include alternation rules, sequencing rules and co-occurrence rules. Alternation rules are the verbal exchange between speaker and hearer of their mutual recognition of their respective status, situation, rank, identity set, kinship, solidarity, familiarity and intimacy. For learners of Spanish, this would include instructions for using the familiar, second person forms as opposed to the formal, third person forms. Sequencing rules are the ways speakers tie together greetings, leave takings, invitations with acceptions or rejections, narrations and group conversations. A student of Indonesian, for example, must know that the polite way to refuse a formal invitation is to smile and say , Terima kasih banjak, "Thank you very much." Americans who use a translation of "No, thank you" or "I am very sorry but I have a previous engagement " appear shockingly rude. This is because breaking a sociolinguistic rule is a form of communication. Co-occurrence rules involve the selection of items

that correspond to the style or register of previously selected items. Languages have at least three style levels; formal, casual and intimate. An English speaker who mixes style levels and says, "Hi'ya, madame!" will probably be thought to be joking.

John J. Gumperz introduced a theory of communicative competence. A similar theory was advanced by J. B. Pride. The communicative competence involves an understanding of the entire culture, of the particular social setting and of the sociolinguistic rules with their appropriate realizations. To insure that his linguistic performance is acceptable, a speaker first makes a judgement according to his communicative competence. Based on this judgement of the social situation, he selects appropriate items from his linguistic competence. Performance is affected by the speaker's evaluation of: (1) the participants, which are the speaker, listener and possible audience; (2) the ecological surroundings, which are both the cultural and physical environment; and, (3) the topic or range of topics of conversation. Work done with bilinguals, where a change in social situation causes a change in language instead of merely a change in dialect or style, reveals the systematic and regular nature of sociolinguistic rules. Gumperz summarizes the theory of social semantics, "The determinants of this communicative process are the speaker's knowledge of the linguistic repertoire, culture and social structure, and his ability to relate these kinds of knowledge to contextual restraints."[11]

The study of bilingualism aids the analysis of the systematic nature of the functioning of sociolinguistic rules. The rules for

each culture can be compared and contrasted for presentation to the student. Teachers must instruct the student in bilingual behavior if his foreign language competence is to be grammatical. They must teach bi-social behavior if the student's foreign language performance is to be acceptable. The study of bilingualism has other pedagogical applications. It aids understanding of the sociological and psychological development of the second language learner. It reveals prevailing social attitudes toward other languages and the people who speak them that have a positive or negative affect on the learning process. Joshua A. Fishman reminds teachers that their business is to create bilinguals. Like second language learners, the majority of natural bilinguals do not have a totally balanced and equal mastery of more than one tongue in all possible linguistic processes and contexts.

> A "normally coordinate bilingual" may have been a compound bilingual initially, when he was just learning his second language. He may revert to compound bilingualism if an atypical occasion arises in which language X is called for, although the domain involved is clearly dominated by Y...most bilinguals manifest both compound and coordinate functioning from minute to minute, from topic to topic, from one interlocutor to another.[12]

Therefore, the language teacher cannot present materials with the expectation that all students will obtain native proficiency in all aspects of linguistic behavior. The teacher must establish a set of priorities and instruct according to these values. He must choose the "contexts of bilingualism." This is the framework within which the student should learn to function most effectively

in the second language. The first context, according to Fishman, is the media of communication. Should language materials stress - the attainment of speaking, reading or writing abilities? The relative priority assigned to each medium will affect the methodology of presentation. The second context is the role of the future bilingual. Should the student become most fluent in comprehension, production or inner speech? The choice of style level of communication, formal, casual or intimate, is Fishman's third "context of bilingualism." Ervin-Tripp discusses the importance of style in co-occurrence rules. Each level requires that the student be taught a different vocabulary, a different sentence structure and a different set of attitudes toward himself and his interlocutors.

The last context is the domain of interaction. Topics of conversation dealing with the home, business, status situations and cultural topics fall individually under the domain of one language as opposed to the other commanded by a bilingual. The contexts of media, role, style level and domain are interdependent. For example, the traditional grammar-translation method stresses the contexts of reading, comprehension, formal level and cultural topics. The audio-lingual method emphasizes speaking, production with comprehension, casual level and home oriented topics. On an absolute scale, one set of priorities is not superior to the other. Fishman's point is the teacher must be aware of and give an evaluation of the contexts he is implanting in the students relative to the desired goal.

The study of bilingualism also aids the analysis of the sociological and psychological adjustments that must be made by a person who communicates grammatically and acceptably in a second language. Vera John's study of bilingual children has led her to posit that different aspects of language acquisition are controlled by different principles of learning and of cognition. Some aspects, for example, phonology, are controlled through physiological habit formation and can benefit from the overlearning proposed by the audio-lingual method. However, other aspects are controlled by cognitive processes. At the Twenty-first Annual Round Table sponsored by Georgetown University in March, 1970, John related three steps of cognitive development.

During the first step, the <u>enactive</u> mode, reality for the child is represented through actions, chiefly his own actions. The <u>ikonic</u> mode is the second. The child represents reality to himself in a scheme that is relatively independent of his actions. The last mode is the symbolic, where the child abstracts reality and depicts it through images and classes. The jump from <u>ikonic</u> representation to symbolic representation is very difficult for the bilingual child. To facilitate this jump, the child should be encouraged to develop his "imaginative conceptual activity" as opposed to his "formal conceptual activity." A viable technique could be the use of imagination in expanding word reactions and associations. To some degree, this can be expected to apply to the second language learner.

V

The previous discussion of new theories in linguistics, psycholinguistics and sociolinguistics poses the question, "How

will these theories be applied in foreign language instruction?" Several specific techniques are included in the Appendix to illustrate possible new trends. Because research is continuing to both expand and refine these theories and their application, future language materials will not hold an exact resemblance to the material presented here. However, these techniques present a forerunner of the general concepts and form that will alter current teaching materials.

In accordance with Chomsky's theory of internal grammar construction and psychological theories of hypotheses building and the general cognitive component of the ILAS device, foreign language students will undoubtedly learn more grammatical points. As each new structure is presented, Rivers suggests that teacher guidance of student constructed hypotheses would aid the learning of patterns. Some examples of the type of analysis that assists the comprehension of analogy is on page eight of the Appendix. Following John's belief that "imaginative conceptual activity" can bridge the gap between ikonic representation and symbolic representation, teachers may be using word association drills. Cook's observation that children separate and articulate the content words before the grammatical items, could lead to content word drills. Students would reinforce their learning of structures by supplying structures to semantic cues rather that only supplying words to structural frames. Examples of these possibilities, that would be particularly useful for review work several weeks after the completion of the lesson, are on pages five to seven.

Klima and Bellugi observed that the children abstracted out and mastered the intonation contours of English interrogatives before mastering the use of sentence inversion or question words. Cook theorized that content words are more readily retained by children because they receive the heavier stress. Several linguists are advocating an early, systematic presentation of the similarities, discriminations and contrasts of the suprasegmentals.

> It has often been noted that a child masters several of these features /suprasegmentals/ in his native language before he is in really good control of vowels or consonants or meanings... they are learned earlier, are not much discussed in school, are further below the level of awareness and are more difficult to verbalize about. We shall begin with these overriding features of the structure of Spanish and English and work down to the smaller details. No utterance can be made in either language without its carrying an intonation pattern...[13]

The Appendix has examples of rhythm drills on pages two and three and examples of intonation drills on pages four and five.

The first intonation drills are in analogous structures and the final presentation of the intonation shows contrast between analogous structures. The last two have a question and answer format that more closely approaches actual communication as suggested by several psychologists and adopted by the SR method. Most teaching material used now could be reinterpreted or reshaped to have situational relevance. Perhaps the ideal drill would be one that gradually guides the student to talk about himself and express his own thoughts.

Future language materials will reflect a more systematic attempt to present sociolinguistic rules. In order for his linguistic performance to be acceptable, the student must acquire a communicative competence. More advanced classes may have demonstrations of style levels and co-occurrence rules. Also, the teacher must understand the limitations imposed by the "contexts of bilingualism" that he is teaching. These must be consistent with the type of bilingual behavior that the student is expected to achieve. The presentation of additional work for students whose potential use of media, role, formality level and domain may not reflect classroom priorities may be considered.

As research in the disciplines of linguistics, psycholinguistics and sociolinguistics continues, the language teacher must examine each new theory and each proven technique with an open mind. He must evaluate discoveries according to the abilities and needs of his students. The basic constant in the ever-expanding research is that the use of language is a creative act. The pleasures of creative self-expression will reinforce the student's learning process. A student who expresses his own thoughts in the new language will continue this expression outside of the time allotted for classroom, laboratory and home assignments. Innovation will stimulate the student to practice his foreign language far more that the educational system demands.

APPENDIX

Following are several classroom drills constructed according to recent experiments and observations in the study of psycholinguistics and sociolinguistics. They are based on the vocabulary and structure presented in Lesson I of Espanol Primer Curso by Mariano E. Gowland. As suggested in the paper, some of these drills could be introduced immediately and some should be used several weeks after the completion of Lesson I as a review of that lesson.

ALLOPHONIC NOTATION

consonants

b ƀ d đ f g ǥ ɦ k l m n ñ ŋ p r R s z t č

(for other dialects ϴ ĩ v)

semi-vowels

y ɣ w ẇ

vowels

a e i o u

Structures of Lesson I

1.	¿De quién es . . .? From whom is . . ?	1a.	. . . es de . . . . . . is from . . .
2.	¿Para quién es . . .? For whom is . . .?	2a.	. . . es para . . . . . . is for . . .
3.	¿Cómo está(n) . . .? How is (are) . . .?	3a.	Estamos(Estoy) : : : We are (I am)

4. ¿Cómo se dice . . .?
   How do you say . .?

5. ¿Qué es (son) . . .?
   What is (are) . .?

5a. Es (son) . . .
    It is (They are) . . .

6. ¿Qué quiere decir . . .?
   What does . . . mean?

7. ¿Qué hay . . .?
   What is (are) . . .?

7a. Hay . . .
    There is(are) . . .

8. ¿No hay . . .?
   Isn't (Aren't) there . . .?

8a. Hay . . .
    There is(are) . . .

9. ¿Hay . . .?
   Is(Are) . . .?

9a. Hay . . .
    There is(are) . . .

Verbs of Lesson I

1. decir
   "to say"

2. es ; son
   "is" "are"

3. está ; estamos , están
   "is" ; "are" "are"

4. tengo ; tenemos tiene (addition)
   "I have" "we have" "they or you (pl.) have"

I. RHYTHM DRILLS

Have the students count out the syllabic beat.

Point out that each syllable has almost equal duration.

A.1. tẹ́n · go kár · tas "I have letters."

2. tẹ́n · go gá · tos "I have cats."

3. Sọ́n de bós · ton "They're from Boston."

4. És de pé · ðřo "It's from Peter."

5. ké es eș · to "What's this?"

6. ké es és · o "What's that?"

IB.1. ti · é · ne pa · pá la kár · ta. "Does Dad have the letter?"

2. ti · é · ne us · téd el bí · no

"Do you have the wine?

C.1. y són las kár · tas de ƀós · ton

"And are the letters from Boston?"

2. y és és · to pá · řa pé ðřo

"And is this for Peter?"

II INTONATION DRILLS

A. Normal, declarative sentence pattern

	2		1	1↘	
1.	tén	· go	kár	· tas	"I have letters."
2.	tén	· go	gá	· tos	"I have cats."
3.	són	de	ƀós	· ton	"They're from Boston."
4.	és	ðe	pé	· ðro	"It's from Peter."
5.	ké	es	és	· to	"What's this?"
6.	ké	es	és	· so	"What's that?"

II B. Emphatic sentence pattern

	2		3	1↘
1.	tén	· go	kář	· tas
2.	tén	· go	gá	· tos
3.	són	de	ƀós	· ton
4.	és	ðe	pé	· ðřo
5.	ké	es	és	· to
6.	ké	es	és	· o

IIC. Normal pattern versus emphatic sentence pattern.

Point out to the student that the speaker makes the statement. Then there is an implied misunderstanding on the part of the listener. "¿Que dice?" (What did you say?) and the speaker repeats his statement with emphasis.

	(1) 2 1 1↓	(1) 2 3 1↓
1.	us·téd ti·e·ne la plán·ta "You have the plant."	1a. us·téd ti·e·ne la plán·ta
2.	pa·pá ti·e·ne el gá·to "Dad has the cat."	2a. pa·pá ti·e·ne el gá·to
3.	es·tá a·ki un·a kář·ta "Here is a letter."	3a. es·tá a·ki un·a kář·ta
4.	la kář·ta es pa·ra pé·dro "The letter is for Peter."	4a. la kář·ta es pa·ra pé·dro
	2 1 1↓	2 3 1↓
5.	pá·ra ki·en es la kář·ta "Who's the letter for?"	5a. pá·ra ki·en es la kář·ta
6.	kó·mo se di·se tař·hé·ta	6a. kó·mo se di·se tař·hé·ta

D. Yes/No question versus normal declarative sentence.

Point out that each line is a question-and-answer dialogue between two speakers. The answer to the question is affirmative.

	2 2 2↗		2 1 1↓	
1.	áy u·na kář·ta "Is there a letter?"	(Sí) (Yes)	1a. áy u·na kář·ta "There's a letter."	
2.	áy u·na plán·ta "Is there a plant?"	(Sí) (Yes)	2a. áy u·na plán·ta "There's a plant."	
3.	áy mu·čo bí·no "Is there much wine?"	(Sí) (Yes)	3a. áy mu·čo bí·no "There's a lot of wine."	
4.	áy mu·čos gá·tos "Are there many cats?"	(Sí) (Yes)	4a. áy mu·čos gá·tos "There are a lot of cats."	

	2 2 2↗			2 1 1↘
5.	és u·na kář·ta "Is it a letter?"	(Sí) (Yes)	5a.	és u·na kář·ta "It's a letter."
6.	és pa·ře pé·dřo "Is it for Peter?"	(Sí) (Yes)	6a.	és pa·ře pé·dřo "It's for Peter."
7.	és de a·bwé ·lo "Is it from grandfather?"	(Sí) (Yes)	7a.	és de a·bwé ·lo "It's from grandfather."

E. Yes/No question versus normal declarative sentence

Point out that each line is a question-and-answer dialogue between two speakers. The answer to the question is negative.

	(1) 2 2 2↗			(1) 2 1 1↘
1.	ti·é·ne pa·pa la kář·ta "Does dad have the letter?"	(No) (No)	1a.	ma·má ti·e·ne la kář·ta "Mom has the letter."
2.	ti·é·ne ma·ma el gá·to "Does mom have the cat?"	(No) (No)	2a.	pa·pá ti·e·ne el gá·to "Dad has the cat."
3.	ti·é·ne us·ted el bí·no "Do you have the wine?"	(No) (No)	3a.	pa·pá ti·e·ne el bí·no "Dad has the wine."
4.	ti·é·ne us·ted la plán·ta "Do you have the plant?"	(No) (No)	4a.	ma·má ti·e·ne la plán·ta "Mom has the plant."
5.	(1) 2 2 2 y són las kař·tas de bós·ton "And are the letters from Boston?"	(No) (No)	5a.	(1) 2 1 1 las kař·tas no son de bós·ton "The letters aren't from Boston."
6.	y és el bi·no de pé·dřo "And is the wine from Peter?"	(No) (No)	6a.	el bí·no no es de pé·dřo "The wine isn't from Peter."

III. CONTENT WORD DRILLS

A.	Question	Possible short answer; long answer
1.	teacher	¿Tiene usted dos cartas para la señora? "Do you have two letters for the lady?"
	student	Sí, dos cartas. / Sí, para la señora. "Yes, two letters."/"Yes, for the lady."

student Sí, tengo dos cartas para la señora.
"Yes, I have two letters for the lady."

2. teacher ¿Hay una carta para el abuelo?
"Is there a letter for grandfather?"

student Sí, hay. / Sí, una carta.
"Yes, there is." / "Yes, a letter."

student Sí, hay una carta para el abuelo.
"Yes, there is a letter for grandfather."

3. teacher ¿Para quién son las tarjetas de mama?
"For whom are the postcards from mom?"

student Para papá.
"For dad."

student Las tarjetas de mama son para papá.
"The postcards from mom are for dad."

4. teacher ¿De quién son las plantas para María?
"From whom are the plants for Mary?"

student De papá.
"From dad."

student Las plantas para María son de papá.
"The plants for Mary are from dad."

5. teacher ¿Está aquí el paquete para papá?
"Is the package for dad here?"

student Sí, está. / Sí, aquí.
"Yes, it is." / "Yes, here."

6. teacher ¿Están aquí los paquetes de Pedro?
"Are the packages from Peter here?"

student Sí, están. / Sí, aquí.
"Yes, they are. / "Yes, here."

IIIB. Advance content drills.

The following content words and their intonation patterns might be expected to cue these sentences.

2 1 1↓
teacher cartas Pedro
student 1. Tengo dos cartas para Pedro.
"I have two letters for Peter."

2. Hay una carta para Pedro.
"There's a letter for Peter."

3. Las cartas son de Pedro.
"The letters are from Peter."

4. Aquí está la carta de Pedro.
"Here is a letter for Peter."

5. No tenemos muchas cartas para Pedro.
"We don't have many letters for Peter."

6. No hay una carta para Pedro.
"There isn't a letter for Peter."

7. Las cartas no son de Pedro.
"The letters aren't from Peter."

8. Las cartas de Pedro no están aquí.
"The letters from Peter aren't here."

2 2 2
teacher carta(s) Pedro↗
student 1. ¿Son las cartas para Pedro?
"Are the letters for Peter?"

2. ¿Son las cartas de Pedro?
"Are the letters from Peter?"

3. ¿Hay carta de Pedro?
"Is there a letter from Peter?"

IV. WORD ASSOCIATION DRILLS

Word	el cartero
Possible associations	1. la carta 2. la tarjeta 3. el paquete
Word	la familia
Possible association	1. la casa 2. los ninos

3. el papá
4. los padres
5. el esposo
6. la esposa
7. el abuelo
8. la abuela

V. GRAMMAR

After the teacher has conducted a guided observation of several pattern drills and dialogue sentences, the students could construct hypotheses similar to the following.

1. Adjectives, including articles, agree with nouns in gender and number.

2. There is no overt marker for singular forms of adjectives and nouns.

3. The marker for plural forms of adjectives and nouns is /s/.

4. In forming an interrogative sentence without a question word, the verb is placed before the subject.

5. The subject of the sentence can be omitted.

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